

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

 Index No. 2 37115  
 (For London Office only).

Ship's Name <i>No. 1689</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>551</i> Breadth <i>70</i> Depth <i>40.5</i>					Date of <del>Survey</del> <i>Computation</i> <i>9/12/42</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>27550</i> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>726</i>					Particulars of Classification <i>100 A 1</i> (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <i>40.50</i>	(a) Where D is greater than Table depth (D-Table depth) R = <i>11.55</i>	Moulded Breadth (B) <i>70</i>
Stringer plate ... .. <i>.08</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <i>3.85</i>	Standard Round of Beam = $\frac{B \times 12}{50} = 16.8$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <i>✓</i>	If restricted by superstructures <i>✓</i>	Ship's Round of Beam = <i>17.5</i>
Depth for Freeboard (D) = <i>40.58</i>		Difference <i>.7</i>
		Restricted to <i>✓</i>
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.7}{4} \times .5625 = .98$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<i>146.00</i>	<i>146.00</i>	<i>7'-6"</i>	<i>✓</i>	<i>146.00</i>
„ overhang ... ..					
R.Q.D. enclosed ... ..					
„ overhang ... ..					
Bridge enclosed. <i>Equi</i> ...	<i>54.33</i>	<i>54.33</i>	<i>7'-6"</i>	<i>✓</i>	<i>54.33</i>
„ overhang aft ... ..	<i>.50</i>	<i>.37</i>			<i>.37</i>
„ overhang forward					
F'cle enclosed ... ..	<i>40.37</i>	<i>40.37</i>	<i>7'-6"</i>	<i>✓</i>	<i>40.37</i>
„ overhang ... ..					
Trunk aft ... ..					
„ forward ... ..					
Tonnage opening aft ...					
„ „ forward					
Total ... ..	<i>241.20</i>	<i>241.07</i>			<i>241.07</i>

Standard Height of Superstructure *7.5*

„ „ R.Q.D. *✓*

Deduction for complete superstructure *42.00*

Percentage covered  $\frac{S}{L} = 43.78$  *✓*

„ „  $\frac{S_1}{L} = 43.75$  *✓*

„ „  $\frac{E}{L} =$  *✓*

Percentage from Table, Line A. *26.68* *✓*  
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. *30.68* *✓*  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) *28.67* *✓*

Deduction = *.2867* x *42* = *-12.04* *✓*

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..		1				1	
$\frac{1}{4}$ L from A.P. ... ..		4				4	
$\frac{2}{8}$ L „ ... ..		2				2	
Amidships ... ..		4				4	
$\frac{3}{8}$ L from F.P. ... ..		2				2	
$\frac{1}{4}$ L „ ... ..		4				4	
F.P. ... ..		1				1	
Total ... ..			<i>585.90</i>				<i>249.00</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = +9.94$  *✓*

If limited on account of midship superstructure. *✓*

Mean actual sheer aft = *def.*

Mean standard sheer aft = *def.*

Mean actual sheer forward = *def.*

Mean standard sheer forward = *def.*

Length of enclosed superstructure forward of amidships = *def. sheer.*

„ „ aft of „ = *def. sheer.*

If limited to maximum allowance of 1½ ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <i>40.58</i> Ft. Summer freeboard = <i>10.75</i> Moulded draught (d) = <i>29.83</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches =	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient $\frac{.726 + .68}{1.36} = 1.406 / 1.36$ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ... ..</td> <td><i>11.55</i></td> <td></td> </tr> <tr> <td>Deduction for superstructures ... ..</td> <td></td> <td><i>-12.04</i></td> </tr> <tr> <td>Sheer correction ... ..</td> <td><i>9.94</i></td> <td></td> </tr> <tr> <td>Round of Beam correction ... ..</td> <td></td> <td><i>.98</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ... ..</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. ... ..</td> <td></td> <td></td> </tr> <tr> <td></td> <td><i>21.49</i></td> <td><i>13.02</i></td> </tr> <tr> <td>Summer Freeboard =</td> <td colspan="2"><i>129.07</i></td> </tr> </tbody> </table>		+	-	Depth Correction ... ..	<i>11.55</i>		Deduction for superstructures ... ..		<i>-12.04</i>	Sheer correction ... ..	<i>9.94</i>		Round of Beam correction ... ..		<i>.98</i>	Correction for Thickness of Deck amidships ... ..			Other corrections, scantlings, etc. ... ..				<i>21.49</i>	<i>13.02</i>	Summer Freeboard =	<i>129.07</i>	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: *10' - 9"*

Tropical Fresh Water Line above Centre of Disc ... ..

Fresh Water Line „ „ ... ..

Tropical Line „ „ ... ..

Winter Line below „ „ ... ..

Winter North Atlantic Line „ „ ... ..

Tropical Fresh Water Freeboard ... ..

Fresh Water „ „ ... ..

Tropical „ „ ... ..

Winter „ „ ... ..

Winter North Atlantic „ „ ... ..